

# Occurrence Report

Waste Isolation Pilot Plant

(Name of Facility)

Nuclear Waste Operations/Disposal

(Facility Function)

Carlsbad Field Office

Westinghouse Waste Isolation Div.

(Laboratory, Site, or Organization)

**Name:** xxxxx

**Title:** FMD

**Telephone No.:** (505) 234-xxxx

(Facility Manager/Designee)

**Name:** xxxxx

**Title:**

**Telephone No.:** (505) 234-xxxx

(Originator/Transmitter)

**Name:**

**Date:**

(Authorized Classifier (AC))

**1. Occurrence Report Number:** ALO--WWID-WIPP-2003-0002

MINOR PERSONNEL INJURIES

**2. Report Type and Date:** Final

	Date	Time
<b>Notification:</b>	05/06/2003	08:07 (MTZ)
<b>Initial Update:</b>	07/02/2003	10:45 (MTZ)
<b>Latest Update:</b>	07/02/2003	10:45 (MTZ)
<b>Final:</b>	08/06/2003	11:39 (MTZ)

**3. Occurrence Category:** Off-Normal

**4. Number of Occurrences:** 1      **Original OR:**

**5. Division or Project:** WTS/WIPP

**6. Secretarial Office:** EM - Environmental Management

**7. System, Bldg., or Equipment:** Underground

**8. UCNI?:** No

**9. Plant Area:** UNDERGROUND

**10. Date and Time Discovered:** 05/05/2003 18:30 (MTZ)

**11. Date and Time Categorized:** 05/05/2003 19:30 (MTZ)

**12. DOE Notification:**

**13. Other Notifications:**

Date	Time	Person Notified	Organization
05/05/2003	19:00 (MTZ)	DOE-FR	CBFO

**14. Subject or Title of Occurrence:**

MINOR PERSONNEL INJURIES

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**15. Nature of Occurrence:**

10) Cross-Category Items

C. Potential Concerns/Issues

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**16. Description of Occurrence:**

Within the past week, three incidents involving minor personnel injuries and/or inattention to details have occurred in the underground. As a result of these events, a safety stand-down in the underground was implemented beginning at 1930 on May 5, 2003, and continuing through the morning shift on May 6. Events are briefly summarized as:

1. At 1900 on 5/1/2003, an employee slammed the door of an equipment cabinet on his hand. The cabinet is part of a piece of mining equipment. The injury required evacuation of the employee to the surface, examination by the site medical personnel, and a precautionary trip to his doctor in town. The employee returned to work for his next scheduled shift.

2. At 1130 on 5/2/2003, an employee was inattentive to his surroundings and raised the hydraulically operated outrigger on a piece of mining equipment, crushing a control panel that is attached to the equipment on a pivot arm. The arm had not been swivelled out of the way before raising the outrigger. Damage was estimated at approximately \$700. No personnel injury occurred.

3. At 1830 on 5/5/2003, an employee injured his hand while operating a drilling machine in the underground. The machine was being used to drill support bolt holes in the ceiling (the "back") of a mine area. The drill bit fell out of the hole while the operator was adding an extension piece, lacerating his hand. The employee was taken to the hospital where the wound was dressed and the employee released.

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**17. Operating Conditions of Facility at Time of Occurrence:**

Routine mining activities

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**18. Activity Category:**

03 - Normal Operations

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**19. Immediate Actions Taken and Results:**

In each injury, the worker received appropriate medical attention. In the equipment damage incident, the equipment was secured and administrative actions were taken to ensure the operator was fit for duty.

After the injury at 1830 on 5/5/2003, WTS management evaluated recent events and implemented a safety stand-down for all underground work beginning at 1930, 5/5/2003. Underground work will resume when appropriate safety evaluations have been completed and management is convinced work will proceed safely.

UPDATE CONCURRENT WITH FINAL REPORT: The first safety stand-down began at 1930 and lasted through the end of the swing shift at 2330 on May 5. Beginning with the next work shift at 0630 on May 6, the day shift spent the first two work hours in a safety stand-down. Regular work routines began at 0830.

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**20. Direct Cause:**

- 3) Personnel Error
  - A. Inattention to Detail

**21. Contributing Cause(s):****22. Root Cause:**

- 3) Personnel Error
    - A. Inattention to Detail
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**23. Description of Cause:**

Each of the reported events was caused by the operator being inattentive to the details of his task.

Event #1 -- CORRECTION to initial report: The door to the operator's compartment on a Fletcher scaler machine closed on the operator's hand, not the door to an equipment cabinet. The scaler machine was parked on a slight incline, causing the door to close faster than normal as the operator got into the cab. The operator had his hand in the way, and it was slammed by the door.

Event #2 -- The control pendant arm has a safety chain which is required to be in place, securing the pivoted control pendant prior to equipment movement. While preparing to tram the Fletcher Seal Cutter to a new location, the operator failed to position the pendant arm to the stowed position and secure the safety chain. When the hydraulic outrigger jacks were raised, one of the jacks hit the operators box on the pendant arm, causing the mounting base of the pendant arm to be bent and distorted.

Event #3 -- The employee was drilling holes for the installation of 13-foot Dywidag roof bolts. While adding a short extension to the drill steel, he lost his grip on the steel in the hole above him. The steel fell out of the hole and pinched his hand between the drill steel and the drill mast. That drill steel is approximately 15-feet long and weighs 29 pounds.

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## 24. Evaluation (by Facility Manager/Designee):

By its very nature, work in the underground environment requires extraordinary attention to detail and care to avoid personnel injury. The three cited events, coupled with the personnel injury on March 7, 2003 (ORPS report ALO--WWID-WIPP-2003-0001) indicate that a renewed focus on underground safety is warranted. The safety stand-down is intended to accomplish that.

UPDATE CONCURRENT WITH FINAL REPORT: An investigation into these events was undertaken. Each event, considered individually, is readily explained as an operator error caused by their own inattention to the task elements and surroundings. The investigation focused on the possibility that more subtle, generalized failure of the WIPP safety programs could have contributed to the injuries.

The investigation included statistical analysis, review of work environments, worker attitudes, and potential distractions in the work place. The investigation was not focused only on these reported injuries in the underground environment, but included minor first-aid cases reported over the past six months, changes in the level of effort necessary to meet stated production goals, viability of recent and current safety initiatives, etc.

Because of the relatively compressed time period in which these event occurred, concerns were raised that they might have been a precursor to a more serious event. The investigation concluded that the reported events do not constitute a statistically significant departure from the norm. Further, no compelling causal factors related to attitudes, work efforts, environment, etc. can be identified.

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## 25. Is Further Evaluation Required?: No

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## 26. Corrective Actions

(\* = Date added/revised since final report was approved.)

1. Review the events with all operators and emphasize the need to keep their minds fully engaged on the task at hand.

<b>Target Completion Date:</b> 07/01/2003	<b>Completion Date:</b> 06/06/2003
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## 27. Impact on Environment, Safety and Health:

Each employee sustained a minor injury, but returned to work after first-aid level medical attention. No work restrictions resulted from any of the events.

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## 28. Programmatic Impact:

None

**29. Impact on Codes and Standards:**

None

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**30. Lessons Learned:**

Constant vigilance and total awareness of surroundings is necessary to achieve a near-zero incident rate.

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**31. Similar Occurrence Report Numbers:**

1. [ALO--WWID-WIPP-2003-0001](#)
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**32. User-defined Field #1:****33. User-defined Field #2:****34. DOE Facility Representative Input:**

A series of three (3) incidents in the WIPP underground involved minor personnel injuries and minor equipment damage were reported within approximately one-week period.

A team of safety professionals from the management and operating contractor (M&OC) and the Carlsbad technical assistance contractor, as directed by the CBFO-WIPP FR, conducted an investigation for incident trend analysis. This action was considered necessary to ensure that fundamental safety management systems and controls in place were effective and that no systemic concerns or issues were overlooked. The FR concurs with analysis results that basically concluded the safety program for all [M&OC] employees was 'in control' with fluctuations caused by statistically random variations and no apparent caused variations (i.e., no data points fell outside the control limits) specific to personnel in attention to detail.

Other M&OC actions were taken which included leading safety meetings with all equipment operators. During these safety meetings, management's attention focused on and emphasized the importance of the operator's attention to detail as fundamental to the safe and effective operation of equipment. I concur with M&OC's actions, which should preclude recurrence similar incidents, were timely and appropriate to address this short-term trend.

Entered by: xxxxx

Date: 08/06/2003

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**35. DOE Program Manager Input:****36. Approvals:**

**Approved by:** xxxxx, Facility Manager/Designee

**Date:** 07/02/2003

**Telephone No.:** (505) 234-xxxx

**Approved by:** xxxxx, Facility Representative/Designee

**Date:** 08/06/2003

**Telephone No.:** (505) 234-xxxx

**Approved by:** Approval delegated to FR

**Date:** 08/06/2003

**Telephone No.:**

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